

# Kristina Elizabeth Hawk, MS MD PhD, DABNM DABR

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*Clinical Instructor, Stanford University School of Medicine,  
Department of Radiology  
Radiology Partners, Matrix Division, Neuroradiology & Nuclear Medicine*



## EDUCATION

**College:** 07/2000–06/2004: University of California Berkeley

Bachelor of Science, Molecular and Cell Biology, emphasis in Neurobiology

2002 summer: University of Sussex, England, study of literature

**Graduate School:** 07/2006–06/2008: College of Health Professions, Rosalind Franklin University (RFUMS)

Masters of Science in Medical Radiation Physics

07/2006–06/2009: School of Graduate and Postdoctoral Studies, RFUMS

Doctorate of Philosophy in Neuroscience

**Medical School:** 07/2004–06/2006: Chicago Medical School, RFUMS

07/2009–06/2011: Keck School of Medicine at University of Southern California (USC)

Medical Doctorate

## POSTGRADUATE TRAINING

**Internship:** 07/2011–06/2012: Preliminary Medicine, Santa Clara Valley Medical Center, San Jose, CA

**Residency:** 07/2012–06/2016: Diagnostic Radiology, University of Southern California (USC) + Los Angeles County (LAC), Los Angeles, CA

**Fellowship:** 07/2012–06/2016: Nuclear Medicine (16-month path), USC + LAC, Los Angeles, CA

07/2016–06/2017: Neuroradiology USC + LAC, Los Angeles, CA

## CERTIFICATION AND LICENSURE

American Board of Nuclear Medicine: 2016 - PASS

American Board of Radiology Core Examination: 2015 – PASS

American Board of Radiology Certifying Examination: 2017 – PASS

DEA: 2013 - current

ACLS and BLS: certified 2011- 2017

USMLE Step 1,2,3: 2006, 2010, and 2012 – PASS

## PROFESSIONAL APPOINTMENTS

01/2019–present: Radiologist, Matrix Division, Radiology Partners  
01/2018–present: Clinical Instructor, Stanford School of Medicine, Department of Radiology  
08/2017–present: President & CEO, HawkImaging LLC  
07/2017–07/2018: Focus Medical Imaging Associate, Los Angeles, CA  
07/2017–07/2018: Volunteer Faculty, LAC+USC Medical Center, Department of Radiology  
07/2016–06/2017: Chief Neuroradiology Fellow, LAC+USC Medical Center, Los Angeles, CA  
07/2015–06/2016: Chief Radiology Resident, LAC+USC Medical Center, Los Angeles, CA  
2005: Summer Internship, Department of Neurosurgery, Taizhuo Hospital, Taizhou, China  
2002–2004: Lab technician, Ernst Gallo Research Center, Emeryville, CA

## EDITORIAL AND REVIEWER APPOINTMENTS

2018–present: Associate Editor, Journal of the American College of Radiology (JACR)  
2018–2019: Associate Editor, Journal of Applied Clinical Medical Physics (JACMP)  
2017–present: Reviewer for Clinical Nuclear Medicine  
2016–2017: American College of Nuclear Medicine Editorial Fellow  
2016–present: Reviewer for the Journal of Clinical Neuroscience  
2014–present: Reviewer for American Journal of Roentgenology (AJR)  
2013–present: Reviewer for the JACR  
2013–2018: Journal of Applied Clinical Medical Physics (JACMP) Guest Section Editor  
2016: Invited AUR-ACR Research Scholar Program Award Selection Committee Member  
2015, 2016, 2017, and 2018: Abstract reviewer and poster judge, ACR 2015, 2016, 2017, 2018

## LEADERSHIP COURSE ATTENDANCE

2014: Nominated and selected to participate in AUR ARRALD leadership training program  
2014: Nominated and selected to participate in RSNA / ARRS Introduction to Academic Radiology Program

## HONORS AND AWARDS

2014, 2015, 2016, 2017 and 2018: “Top Reviewer” for the JACR  
2013: ACR, Member-in-Training Representative to the Intersociety Summer Conference  
2013: USC Department of Radiology, Resident Medical Student Educator of the Year  
2013: RSNA Merit award: “Neurological Emergencies in Pregnancy: Overview and Imaging”  
2013: RSNA Merit award: “Demyelinating lesions: Multiple Sclerosis (MS), Neuromyelitis Optica (NMO), Tumefactive Demyelinating Lesions (TDL) and beyond. Differential diagnosis and pictorial review”  
2011: Gold Star Award, Santa Clara Valley Department of Internal Medicine  
2009, 2008, 2007, and 2005: Outstanding Female Leadership Award, RFUMS  
2009: RFUMS Professionalism Award for the School of Graduate and Postdoctoral Studies  
2009: Excellence in student leadership, RFUMS Student Development

2008: Scholarship for excellence in service to the Rosalind Franklin University campus community  
2008, 2007: All School Research Consortium MD/PhD travel award for excellence in scientific presentation  
2008: Ben Blivass Travel Award for excellence in graduate research  
2008: Executive Student Council travel award for research presentation  
2000: UC Berkeley Alumni Scholarship for excellence in student leadership (declined)  
2000: Wellesley Book Award for outstanding female leadership

## **SERVICE**

### **Membership:**

2015–present: Member of Society of Nuclear Medicine and Molecular Imaging, SNMMI  
2015–present: Member of American College of Nuclear Medicine, ACNM  
2012–present: Member of American College of Radiology, ACR  
2009–present: Member of Radiological Society of North America, RSNA  
2009–present: Member of American Association for Women Radiologists, AAWR  
2016–2017: Member of the American Society of Neuroradiology, ASNR  
2012–2017: Member of American Society of Functional Neuroradiology, ASFNR  
2012–2017: Member of American Society of Head and Neck Radiology, ASHNR  
2012–2017: Member of Association of University Radiologists, AUR  
2012–2017: Member of American Society of Neuroradiology, ASNR  
2009–2017: Member of American Roentgen Ray Society, ARRS  
2011–2012: Student member of American Medical Student Association, AMSA  
2011–2012: Student member of American Medical Association, AMA  
2011–2012: Student member of American Medical Women's Association, AMWA  
2006–2009: Student member of Society for Neuroscience, SNF

### **Professional Service:**

2020–present: RP One, Radiology Partners philanthrope fund physician committee member  
2020–present: American Board of Nuclear Medicine, Board of Directors  
2019–present: Consultant, Philips Medical Imaging  
2019–present: Radiology Partners Diversity and Inclusion Council Member  
2019–present: Radiology Partners Culture and Leadership Board Member  
2019: WRSNM Program Co-Chair  
2018–present: Faculty, Radiology Leadership Institute, Leadership Essentials Course  
2018–present: SNMMI General Nuclear Medicine Council Board of Directors  
2018–present: SNMMI Advanced Associate Council Board of Directors  
2017–present: ACR Council Steering Committee (May 2017 – May 2021)  
2017–present: Consulting Neuroradiologist, Inform AI  
2017–present: Chair, Nuclear Medicine Program Committee, California Radiological Society / LARS  
2016–present: Member, ACR Nuclear Medicine Commission

2014–2018: Board member, AAWR (American Association for Women in Radiology)  
2014–2018: Chair, member-in-training outreach committee for AAWR  
2014–present: Member, ACR Commission for Women and General Diversity  
2017–2018: Co-Chair, ACR CSC Committee, Gamma Cameras Equipment Technical Standard  
2017–2018: Co-Chair, ACR CSC Committee, PET/CT Imaging Equipment Technical Standard  
2017–2018: Co-Chair, ACR CSC Co-Chair Work Group on communications  
2017: Member, ACR CSC Annual Meeting Workgroup  
2017–2018: SNMMI Brain Imaging Council Board of Directors  
2016–2017: Chair, Residents and Fellows Program Committee, California Radiological Society  
2014–2016: Member, ACR Economics Commission, Committee on Economic Issues in Academic Radiology

**Residency and Fellowship Service:**

2015–2016: Vice-President for Education, Nuclear Medicine Residents Organization (NMRO)  
2015–2016: Board member, ACR Residents and Fellows Section, Educational Liaison for ACR  
2014–2015: Member, ACR HI-RADS working group  
2013, 2014: Invited panelist, Keck Salerni Career Night  
2013, 2014: Invited panelist, Keck School of Medicine Career Advising Event  
2013–2014: Resident member, Graduate Medical Education Committee at USC  
2013–2014: Co-President, Residents and Fellows Section of California Radiological Society  
2012–2014: Ambassador, Inter-professional QI project at USC  
2012–2014: Resident member, Graduate Medical Education Committee at USC  
2012–2013: President-Elect, Residents and Fellows Section, California Radiological Society  
2012–2013: Resident representative, Keck Hospital Radiation Safety Committee  
2012–2013: Resident Director, Brant and Helms Club

**Graduate School Service:**

2008–2009: President, Executive Student Council at RFUMS  
2007–2008: President, MD/PhD Association at RFUMS  
2007–2008: President, Medical Radiation Physics student government at RFUMS  
2006–2008: Representative, American Physician Scientist Association (APSA)  
2006–2008: Graduate Student Representative Seat on University Honor Council at RFUMS  
2006–2007: Vice-president, American Medical Student Association (AMSA) RFUMS chapter

**Medical School Service:**

2005–2006: President, student interest group in neurology, SIGN, at RFUMS  
2005–2006: Director, adolescent substance abuse program, ASAP, at RFUMS  
2005–2006: Pharmacology class representative  
Summer 2005, 2006: Orientation advisor for incoming medical students  
2004–2006: Class representative, student interest group in neurology, SIGN, at RFUMS

2004–2005: Teacher, AIDS awareness in local high schools, CMS CARES, at RFUMS

2004–2005: Teacher, adolescent substance abuse program, ASAP, at RFUMS

### College Service:

2004: Volunteer human anatomy instructor, Berkeley elementary school

2004: Class instructor, the Lawrence Hall of Science Museum

2003: Summer research student, Emergency Department at LA County Hospital

2001–2003: Teaching assistant for UC Berkeley course: Biology 1B.

2001–2002: Big Sister, WYSE (women and youth supporting each other)

2001–2002: Big Sister, YWCA (young women's Christian association)

## SCHOLARLY ACTIVITIES

### Scholarly Teaching

2020: Invited Speaker for Radiology Partners Practice Leadership Summit, Culture and Leadership

2019: Invited Speaker for Women in Nuclear Medicine SNMMI annual meeting

2019: Invited Speaker for Young Physicians in Nuclear Medicine SNMMI annual meeting

2018: Invited Speaker AAWR RSNA Higginbotham Lunch Lecture

2018: Invited Lecture, Minnesota State Radiological Society, "Patient Centered Care"

2017: St. Vincent Hospital, Grand Rounds, "Use of PET-CT in Medicine, Neurology and Psychology"

2016–2017: Fellow Clinical Instructor, Radiology Medical Student Clerkship, USC Keck School of Medicine

2012–2016: Resident Clinical Instructor, Radiology Medical Student Clerkship, USC Keck School of Medicine

2012, 2013: Invited Lecturer, **Harvey Meyers Memorial Lecture, Society of Graduate Radiologists Meeting**

2006–2009: Presenter at Interdisciplinary Neuroscience Departmental Journal Club, RFUMS

2006–2008: Teaching assistant, Department of Neuroscience, RFUMS, North Chicago, IL

2006–2008: Teaching assistant, Department of Pharmacology, RFUMS, North Chicago, IL

2006–2008: Private tutor in Histology and Neuroscience, RFUMS, North Chicago, IL

### Scholarly Writings

#### Scientific Abstracts

- Daldrup-Link HE, Gulaka P, **Hawk KE**, Muehe AM, Theruvath AJ, Yerneni K. (2018) Does 18F-FDG Dose Reduction for PET/MRI Affect Treatment Response Assessment of Lymphomas and Sarcomas? RSNA
- **Hoque KE**, Rosenkrantz AB, Hemingway J, Hughes DR, Duszak R. (2018) Unique Medicare Beneficiaries Served by Radiologists: Which of Us "Touch" the Most Patients? ACR
- **Hoque KE**, Hemingway J, Hughes DR, Duszak R. (2017) Radiologists serve more CMS beneficiaries each year than any other medical specialty. ACR
- **Hoque KE**, England J, Lee K, Lekht I, Colletti PM (2016). Characterization of yttrium-90 PET/CT as a tool to evaluate initial dosimetry and efficacy of yttrium-90 radioembolization. SNMMI Annual Meeting

- **Hoque KE**, Sammut S, West AR (2009). Dopamine D2 receptor-dependent modulation of nitric oxide synthase activity in the rat. Poster presented at Society for Neuroscience.
- **Hoque KE**, West AR (2009). Dopaminergic modulation of nitric oxide synthase activity elicited in the nucleus accumbens via stimulation of hippocampal afferents. Poster presented at Society for Neuroscience
- Dec AM, **Hoque KE**, Leilabadi S, Wolf M, West AR (2009). Impact of neonatal NOS-1 inhibitor exposure on prefrontal-temporolimbic integration in the rat nucleus accumbens. Poster presented at Society for Neuroscience.
- **Hoque KE**, West AR (2008) Dopamine D1 receptor-dependent modulation of nucleus accumbens nitric oxide synthase: regional histochemical investigations. Poster presented at Society for Neuroscience.
- **Hoque KE**, West AR (2007) Electrical stimulation of the hippocampus facilitates nitric oxide efflux in the nucleus accumbens via a neuronal NOS dependent mechanism. Poster presented at Society for Neuroscience, RFUMS All School Research Consortium, Chicago chapter Society for Neuroscience, ASCI/AAP joint national meeting and MD/PhD national student conference.
- West AR, Dec A, Park DJ, Ondracek J, **Hoque KE**, Burnazi M, Threlfell S, Sammut S. (2007) Activation of striatal nitric oxide signaling by dopaminergic and glutamatergic transmission: Differential modulation of striatal neuron activity in vivo. Poster presented at Society for Neuroscience and IBAGS Conference.
- **Bray KE\***, Ondracek JM, Sammut S, Dec A, Park DJ, Indorkar RP, Burnazi M, West AR. (2006) Role of nitric oxide signaling in corticostriatal feed-forward modulation of neuron activity in vivo. Poster presented at All School Research Consortium and Chicago chapter Society for Neuroscience.

#### ***Educational Exhibits***

- **K. E. Hawk**, C. R. Farrell, A. Pareek, A. Muehe, A. Pribnov, R. Steffner, R. Avedian, H. E. Daldrup-Link. EP-0527 PET/MR imaging of pediatric bone tumors: Case based review. EANM 2019
- **K. E. Hawk**, A. Muehe, F. Siedek, A. J. Theruvath, H. E. Daldrup-Link. EP-0938 Technical limitations of 18F-FDG PET/MR in pediatric oncology: Case-based review of false positive findings. EANM 2019
- **Hoque KE**, DeLaO AJ (2018) Systematic Review of Patient Educational Materials for Nuclear Medicine Examinations. SNMMI Annual Meeting
- **Hoque KE**, DeLaO AJ (2018) Systematic Review of Current Tools to Assess the Patient Experience in Nuclear Medicine SNMMI Annual Meeting
- **Hoque KE**, DeLaO AJ (2018) Review of Patient Ability to Access Nuclear Medicine Literature SNMMI Annual Meeting
- **Hoque KE**, Gibbs W, Colletti PM (2017). Review of Advances in Alzheimer's Disease Imaging. ASNR 2017
- **Hoque KE**, Gibbs W, Colletti PM (2017). Imaging the Spine with Sodium Fluoride F18 Positron Emission Tomography Computed Tomography (18F-NaF PET/CT). ASNR 2017
- **Hoque KE**, Gibbs W, Colletti PM (2017). Safely Imaging the Pregnant Patient. ASNR 2017
- **Hoque KE**, Colletti PM, Gibbs W (2017). Imaging the Spine with Sodium Fluoride F18 Positron Emission Tomography Computed Tomography (18F-NaF PET/CT). ASSR 2017



- **Hoque KE**, Colletti PM, Gibbs W (2017). Treating Spine Osseous Metastatic Disease with Radium 223 dichloride. ASSR 2017
- **Hoque KE**, Colletti PM, Gibbs W (2017). Use of Radiotracers in Spinal Imaging. ASSR 2017
- Ceglar SR, **Hoque KE**, Walker D. Review of Common Fetal Neural Tube Defects and Central Nervous System (CNS) Anomalies. Presented as an Educational Exhibit for CME at RSNA 2016.
- **Hoque KE**, Bassim ES, Walker D. Review of Fetal Ultrasound and MRI Safety. ARRS 2016.
- Lee J, **Hoque KE**, Keller Z, Hemingway J, Walker D. The Placenta: A Review. ARRS 2016.
- **Hoque KE**, Bassim ES, Walker D. Review of Safety of Fetal Ultrasound. RSNA 2015.
- Prosper A, **Hoque KE**, Khadem N, VanWinden K, Lee S, Walker D. Imaging of Breast Cancer during Pregnancy. RSNA 2015.
- **Hoque KE**, Walker DK. Review of Safety of MRI in Pregnancy. RSNA 2014. CME Oral Presentation.
- **Hoque KE**, Walker DK. Ultrasound of the Lower Extremity: A Step in the Right Direction. RSNA 2014.
- Hussan M, Kingston SE, Treister DS, **Hoque KE**, et al. Cystic Sellar Lesions: A Case-based Review. RSNA 2014.
- Kingston SE, Treister DS, Hussan M, **Hoque KE**, et al. Neurocysticercosis of the Spine. RSNA 2014.
- **Hoque KE**, Prosper AE, Reddy S, Walker DK. Imaging of Neurological Emergencies in Pregnancy. ASER 2013.
- Keller ZS, **Hoque KE**, Prosper AE, Walker DK. A Portrait of the Placenta: Development, Anatomy, Imaging and a Potpourri of Pathology. RSNA 2013.
- **Hoque KE**, Prosper AE, Reddy S, Walker DK. Neurological Emergencies in Pregnancy: Overview and Imaging. RSNA 2013.
- **Hoque KE**, Lerner A, Vyas A, Go JL, Kim PE, Boyko OB, Shiroishi M, Rajamohan A, Law M. Demyelinating lesions: Multiple Sclerosis (MS), Neuromyelitis Optica (NMO), Tumefactive Demyelinating Lesions (TDL) and beyond. Differential diagnosis and pictorial review. RSNA 2013.
- Prosper AE, **Hoque KE**, Walker DK. Interstitial Ectopic versus Cornual or Angular Pregnancy? An Approach to Imaging. RSNA 2013.
- Earhart C, Prosper AE, MD, **Hoque KE**, Walker DK, Palmer SL. Magnetic Resonance Imaging of the Fetal Chest. RSNA 2013.
- **Hoque KE**, Lerner A, Shiroishi MS, Torres F, Go JL. Immune Related Disorders of the Spinal Cord: A Pictorial Review. ASNR 2013.
- **Hoque KE**, Huhdanpaa H, Hwang DH, Muradyan N, Booker MT, Russell S, Sivasundaram L, Naghi I, Kim PE, Lerner A, Law M, Shiroishi MS. T1-Weighted Dynamic Contrast-Enhanced and T2\*-Weighted Dynamic Susceptibility Contrast MR Imaging - Physical Principles, Techniques and Clinical Applications in Neuro-Oncology: What the Neuroradiologist Needs to Know. ASNR 2013.
- Torres F, **Hoque KE**, Lerner A, Shiroishi MS, Go JL. Views of the Third-Window Phenomenon: What a Radiologist Needs to Know. ASNR 2013.
- Torres F, Lerner A, Shiroishi MS, **Hoque KE**, Go JL. Conductive Hearing Loss: Common Etiologies and Key Imaging Features. ASNR 2013.

- **Hoque KE**, Lerner A, Stempel DA, Shiroishi MS, Go JL, Boyko OB, Kim PE, Mogensen MA, Law EM. Imaging of the Limbic System: Review of Anatomy and MR Imaging Features of Diseases Involving the Hippocampus and the Circuit of Papez. RSNA 2010.
- **Hoque KE**, Lerner A, Loo JT, Stempel DA, Shiroishi MS, Go JL, Mogensen MA, Kim PE, Zee CS, Law EM. Meckels Cave and Gasserian Ganglion Disease: Pictorial Review of CT and MR Imaging Anatomy and Pathology. RSNA 2010.
- **Hoque KE**, Lerner A, Peters GT, Mogensen MA, White EA, Kim PE, Ozhand A, Shiroishi M. Pathology of Facet Joints of the Spine: Pictorial Review of Solitary Lesions and Systemic Disease Involving the Facet Joints and Adjacent Tissues. RSNA 2010.

## PUBLICATIONS

- Currie G, **Hawk KE**, Rohren E, Vial A, Klein R. Machine Learning and Deep Learning in Medical Imaging: Intelligent Imaging. J Med Imaging Radiat Sci. 2019 Dec;50(4):477-487.
- Currie G, **Hawk KE**, Rohren EM. Ethical principles for the application of artificial intelligence (AI) in nuclear medicine. Eur J Nucl Med Mol Imaging. 2020 Apr;47(4):748-752.
- Muehe AM, Yerneni K, Theruvath AJ, Thakor AS, Pribnow A, Avedian R, Steffner R, Rosenberg J, **Hawk KE**, Daldrup-Link HE. Ferumoxytol Does Not Impact Standardized Uptake Values on PET/MR Scans. Mol Imaging Biol. 2019 Jul 19.
- Segovis C, **Hawk KE**, Friedberg EB, Lewis E, Metter D, Everett C, Duszak R Jr, Swan TL. The Purpose and Best Role for Councilors and Chapter Leaders in the ACR: Report From the ACR 2018 Open-Microphone Session. J Am Coll Radiol. 2019 Sep;16(9 Pt A):1232-1234.
- Rosenkrantz AB, **Hoque KE**, Hemingway J, Hughes DR, Duszak R Jr. Unique Medicare Beneficiaries Served: A Radiologist-Focused Specialty-Level Analysis. J Am Coll Radiol. 2018 May;15(5):734-739.e2.
- **Hoque KE**, Blume SR, Sammut S, West AR. Electrical stimulation of the hippocampal fimbria facilitates neuronal nitric oxide synthase activity in the medial shell of the rat nucleus accumbens: Modulation by dopamine D1 and D2 receptor activation. Neuropharmacology. 2017 Nov;126:151-157.
- **Hoque KE**, Colletti PM. Chapter 16: MR of Cardiovascular Disease in Pregnancy. In MR of Fetal and Maternal Diseases in Pregnancy. Book in Preparation, Ed. Masselli, published by Springer. 2015
- **Hoque KE**. Accepting the Challenge: A Resident's Prospective on the intersociety Summer Conference. ACR Bulletin. 2014 Jun 10.
- Treister D, Kingston S, **Hoque KE**, Law M, Shiroishi MS. Multimodal magnetic resonance imaging evaluation of primary brain tumors. Semin Oncol. 2014 Aug;41(4):478-495.
- Dec AM, Kohlhaas KL, Nelson CL, **Hoque KE**, Leilabadi SN, Folk J, Wolf ME, West AR. Impact of neonatal NOS-1 inhibitor exposure on neurobehavioural measures and prefrontal-temporolimbic integration in the rat nucleus accumbens. Int J Neuropsychopharmacol. 2014 Feb;17(2):275-87.
- **Hoque KE**, Hoque M, Patel M. Idiopathic Hypertrophic Pachymeningitis. Case in Point, ACR. Accepted 2012 Apr.
- **Hoque KE**, West AR. Dopaminergic modulation of nitric oxide synthase activity in subregions of the rat nucleus accumbens. Synapse. 2012 Mar;66(3):220-31.



- **Hoque KE**, Indorkar RP, Sammut S, West AR. Impact of dopamine-glutamate interactions on striatal neuronal nitric oxide synthase activity. *Psychopharmacology (Berl)*. 2009 Oct 9.
- Ondracek JM, Dec A, **Hoque KE**, Lim SA, Rasouli G, Indorkar RP, Linardakis J, Klika B, Mukherji SJ, Burnazi M, Threlfell S, Sammut S, West AR. (2008) Feed-forward excitation of striatal neuron activity by frontal cortical activation of nitric oxide signaling in vivo. *Eur J Neurosci*. Apr;27(7):1739-54.
- Sammut S, **Bray KE\***, West AR. (2007) Dopamine D(2) receptor-dependent modulation of striatal NO synthase activity. *Psychopharmacology (Berl)*. Apr;191(3):793-803.

*\*publication under maiden name*

*Nota Bene, Dr. Hawk practiced under the last name Hoque August 2007 – until July 2018,  
and under the last name Bray prior to August 2007*